

**Lane Construction
Aroostook County
Houlton, Maine
A-286-71-K-R/A (SM)**

**Departmental
Findings of Fact and Order
Air Emission License**

After review of the air emission license renewal application, staff investigation reports, and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

Lane Construction (Lane), located in Houlton has applied to renew their air emission license permitting the operation of their hot mix asphalt plant and their crushed stone and gravel facility.

Incorporated in this renewal is the addition of an AC Tank heater for inventory purposes only.

B. Emission Equipment

Asphalt Plant:

<u>Equipment</u>	<u>Process Rate (tons/hour)</u>	<u>Design Capacity Firing Rate</u>	<u>Control Devices</u>	<u>Stack ID</u>	<u>Date of Manufacture</u>
Rotary Dryer	120	34.0 MMBtu/hr, 246 gal/hr, #2 fuel oil (0.35% S) and specification waste oil (0.7% S)	baghouse	22	1969

Concrete Plant

<u>Equipment</u>	<u>Process Rate (cubic yards/hour)</u>	<u>Control Devices</u>	<u>Stack ID</u>
Concrete Batch Plant	60	Baghouse	EESCO

Rock Crushers

<u>Designation</u>	<u>Powered</u>	<u>Process Rate (tons/hour)</u>	<u>Control Device</u>	<u>Date of Manufacture</u>
Primary	Diesel	150	Spray Nozzle	Pre-1973
Secondary	Diesel	100	Spray Nozzle	Pre-1973

Other Fuel Burning Equipment

Equipment	<u>Date of Construction</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate (gal/hr)</u>	<u>Fuel Type, % sulfur</u>	Stack #
Diesel Generator	Pre-1973	2.1	15.2	#2 fuel oil, 0.35%S	D1
Genset 3412	1998	3.9	28.3	#2 fuel oil, 0.35%S	G1
Genset D330	1990	1.1	8.0	#2 fuel oil, 0.35%S	G3
Genset D334	1974	1.7	12.4	#2 fuel oil, 0.35%S	G5
Night Generator*	1998	0.17	1.2	#2 fuel oil, 0.35%S	G4
AC Tank heater**	1969 (est.)	0.45	3.0	#2 fuel oil, 0.5%S, specification waste oil,0.7%S	H1

*Noted for inventory purposes only (less than 0.5 MMBtu/hr).

**Noted for inventory purposes only (less than 1.0 MMBtu/hr).

C. Application Classification

The application for Lane includes new equipment for inventory purposes, therefore the license is considered to be a renewal and an amendment and has been processed as such. With the fuel limit on the asphalt plant and generators, the facility is licensed below the major source thresholds and is considered a synthetic minor.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Department regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

B. Asphalt Batch Plant

The asphalt batch plant was manufactured in 1969 and is therefore not subject to EPA New Source Performance Standards (NSPS) Subpart I for Hot Mix Asphalt Facilities manufactured after June 11, 1973.

The asphalt batch plant fires #2 fuel oil (0.35% sulfur maximum) and specification waste oil (0.7% sulfur maximum). Fuel use shall not exceed 600,000 gal/year based on a 12 month rolling total.

To meet the requirements of BPT for the control of particulate matter (PM) emissions from the asphalt plant rotary dryer shall vent to a baghouse. Opacity from the asphalt batch plant baghouse is limited to no greater than 20% on a 6 minute block average basis, except for no more than 2, six minute block averages in a continuous 3 hour period.

Based on the above hot mix asphalt plant process rate, the maximum PM emission rate from the asphalt baghouse shall be limited to 0.03 grs/dscf (5.40 lb/hr).

The performance of the baghouse shall be constantly monitored by either one of the following at all times the rotary dryer is operating:

1. PM detector – when the detector signals excessive PM concentrations in the exhaust stream, Lane shall take corrective action within 24 hours, or immediately if opacity exceeds 20%.
2. Personnel with a current EPA Method 9 visible emissions certification – when the opacity exceeds 20%, the hot mix asphalt plant is operating with insufficient control and corrective action shall be taken immediately.

Fugitive particulate emissions from the asphalt plant shall be controlled so as to prevent visible emissions in excess of 10% opacity on a 6-minute block average basis.

Virgin oil contaminated soil processing cannot exceed 10,000 cubic yards per year without prior approval from the Department. The facility shall only process soil contaminated with virgin oil without prior approval from the Department (reference MEDEP Chapter 409).

C. Concrete Batch Plant

To meet the requirements of BPT for control of PM emissions from the cement silo, particulate emissions shall be vented through a baghouse maintained for 99% removal efficiency. Visible emissions from the cement silo baghouse is limited to no greater than 5% opacity on a 6-minute block average basis.

All components of the concrete batch plant shall be maintained so as to prevent PM leaks. Visible emissions from concrete batching operations shall not exceed 20% opacity on a 6-minute block average basis.

D. Rock Crushers

The primary rock crusher is a portable unit with a rated capacity of 150 tons per hour and the secondary rock crusher is a portable unit with a rated capacity of 100 tons per hour. Each were manufactured prior to 1973 and are therefore not subject to EPA NSPS Subpart OOO for Nonmetallic Mineral Processing Plants manufactured after August 31, 1983, with capacities greater than 150 tons/hr for portable plants and greater than 25 tons/hr for non-portable plants.

The regulated pollutant from the rock crushers is particulate emissions. To meet the requirements of BPT for control of PM emissions from the rock crushers, Lane shall operate and maintain water sprays on the rock crushers and operate as necessary. Visible emissions from the rock crushers shall be limited to no greater than 10% opacity on a 6-minute block average basis.

E. Diesel Units

The Diesel Generator has an approximate power rating of 300 HP, based on a heat input of 2.1 MMBtu/hr, Genset 3412 has an approximate power rating of 556 HP based on a heat input of 3.9 MMBtu/hr, Genset 334 has an approximate power rating of 242 HP based on a heat input of 1.7 MMBtu/hr and Genset D330 has an approximate power rating of 157 HP based on a heat input of 1.1 MMBtu/hr; each based on 35% efficiency. BPT for the internal combustion engines is the following:

1. Total annual diesel fuel use in the diesels is limited to 40,000 gallons.
2. Chapter 106 regulates fuel sulfur content, however the use of 0.35% sulfur by weight fuel is more stringent and shall be used.
3. SO₂ emission data was based on fuel sulfur mass balance.
4. NO_x, CO and VOC emission limits are based upon AP-42 data dated 10/96 for diesel engines less than 600 horsepower.
5. PM and PM₁₀ emission rates were based upon BPT of 0.12 #/MMBtu.
6. Opacity from the Diesel Generator and Genset 3412 each shall not exceed 30% on a six (6) minute block average basis, except for two (2) six (6) minute block averages in a 3-hour period.
7. Opacity from Genset 3412 and Genset D330 each shall not exceed 20% on a six (6) minute block average basis, except for two (2) six (6) minute block averages in a 3-hour period (previous BACT determination).

F. Stock Piles and Roadways

Visible emissions from a fugitive emission source shall not exceed an opacity of 20 percent, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20 percent in any one (1) hour.

G. General Process Emissions

Visible emissions from a general process (including conveyor belts) shall not exceed an opacity of 10% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period.

H. Facility Emissions

Annual emissions were based on the following fuel use:

- 600,000 gallons per year #2 fuel oil (0.35% sulfur) and specification waste oil (0.7% sulfur) in the rotary kiln
- 40,000 gallons per year diesel fuel, (0.35% sulfur by weight maximum) in the diesel units

(all based on a 12 month rolling total)

Total Annual Emissions for the Facility (used to calculate the annual license fee)

Pollutant	Asphalt Plant (Tons)	Diesel Units (Tons)	Total Tons/year
PM	6.67	0.33	7.0
PM ₁₀	6.67	0.33	7.0
SO ₂	29.61	0.99	30.6
NO _x	17.79	12.17	30.0
CO	59.29	2.62	61.9
VOC	1.22	0.97	2.2

III. AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a renewal source shall be determined on a case-by-case basis. Based on the above total facility emissions, Lane is below the emissions level required for modeling and monitoring.

ORDER

Based on the above Findings and subject to conditions listed below the Department concludes that the emissions from this source:

will receive Best Practical Treatment,
will not violate applicable emission standards,
will not violate applicable ambient air quality standards in
conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-286-71-K-R/A, subject to the following conditions:

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (38 MRSA §347-C).

- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [MEDEP Chapter 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [MEDEP Chapter 115]
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [MEDEP Chapter 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to 38 M.R.S.A. §353. [MEDEP Chapter 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [MEDEP Chapter 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [MEDEP Chapter 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [MEDEP Chapter 115]
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [MEDEP Chapter 115]
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [MEDEP Chapter 115]

- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
- A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 - 1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 - 2. pursuant to any other requirement of this license to perform stack testing.
 - B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - C. submit a written report to the Department within thirty (30) days from date of test completion.
- [MEDEP Chapter 115]
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
- A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
 - B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
 - C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.
- [MEDEP Chapter 115]
- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [MEDEP Chapter 115]
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions

unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [MEDEP Chapter 115]

- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [MEDEP Chapter 115]

(16) **Batch Mix Asphalt Plant**

- A. Emissions from the batch mix asphalt plant shall vent to a baghouse, and all components of the asphalt plant shall be maintained so as to prevent PM leaks. [MEDEP Chapter 115, BPT]
- B. The performance of the baghouse shall be constantly monitored by either one of the following at all times the batch mix asphalt plant is operating [MEDEP Chapter 115, BPT]:
1. PM detector – when the detector signals excessive PM concentrations in the exhaust stream, Lane shall take corrective action within 24 hours, or immediately if opacity exceeds 20%.
 2. Personnel with a current EPA Method 9 visible emissions certification – when the opacity exceeds 20%, the asphalt plant is operating with insufficient control and corrective action shall be taken immediately.
- C. To document maintenance of the baghouse, the licensee shall keep a maintenance log recording the date and location of all bag failures as well as all routine maintenance. The maintenance log shall be kept on-site at the asphalt plant location. [MEDEP Chapter 115, BPT]
- D. Opacity from the baghouse is limited to no greater than 20% on a six (6) minute block average basis, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period. [MEDEP Chapter 101]
- E. General process emissions from the batch mix asphalt plant shall be controlled so as to prevent visible emissions in excess of 20% opacity on a six (6) minute block average basis except for no more than one (1) six (6) minute block average in a 1-hour period. [MEDEP Chapter 101]

- F. Fuel use records and receipts for the batch mix asphalt plant shall be maintained for at least six years and made available to the Department upon request. A log shall also be maintained recording the quantity and analyzed test results of all specification waste oil in the dryer. [MEDEP Chapter 115, BPT]
- G. Fuel use in the batch mix asphalt plant shall be limited to the use of 600,000 gal/year of #2 fuel oil (0.35% sulfur by weight maximum) and specification waste oil (0.7% sulfur by weight maximum) (12 month rolling total). Emissions from the baghouse shall not exceed the following:

<u>Pollutant</u>	<u>grs/dscf</u>	<u>lb/hr</u>
PM	0.03	5.40
PM ₁₀	n/a	5.40
SO ₂ [*]	n/a	23.97
NO _x	n/a	14.40
CO	n/a	48.00
VOC	n/a	0.98

*SO₂ emissions based on 0.7% sulfur specification waste oil.

- I. The licensee shall not process more than 10,000 cubic yards of soil contaminated with virgin oil per year without prior approval from the Department. Processing of virgin oil contaminated soils may require a solid waste processing facility license under MEDEP Chapter 409. The material shall be handled in accordance with the requirements of the Bureau of Remediation and Waste Management. [MEDEP Chapter 115, BPT]
- J. Without prior approval from the Department, the licensee shall only process soil contaminated with virgin oil. [MEDEP Chapter 409]
- K. The licensee shall not process contaminated soils which are classified as hazardous waste or which have unknown contaminants. [MEDEP Chapter 115, BPT]
- L. When processing virgin oil contaminated soils, the licensee shall maintain records which specify the quantity and type of contaminant in the soil, the origin of the soil and the contaminant, and the characterization of the contaminated soil. In addition when processing virgin oil contaminated soil, the licensee shall maintain records of processing temperature, asphalt feed rate, fuel use, soil moisture content, and dryer throughput, on an hourly basis. [MEDEP Chapter 115, BPT]

(17) **Diesel Units**

- A. Combined fuel use in the Diesel Generator, Genset 3412, Genset D330 and Genset D334 shall not exceed 40,000 gal/year of #2 fuel oil (12 month rolling total), with a sulfur content not to exceed 0.35% by weight. Fuel use records and receipts (showing the quantity and percent sulfur of the fuel) for the diesel engines shall be maintained to demonstrate compliance. [MEDEP Chapter 115, BPT]

- B. Emissions from the Diesel Engine shall be limited to the following [MEDEP Chapter 115, BPT]:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.25
PM ₁₀	0.25
SO ₂	0.75
NO _x	9.26
CO	2.00
VOC	0.74

- C. Emissions from Genset 3412 shall be limited to the following [MEDEP Chapter 103 and Chapter 115, BPT]:

<u>Pollutant</u>	<u>lb/MMBtu</u>	<u>lb/hr</u>
PM	0.12	0.47
PM ₁₀	n/a	0.47
SO ₂	n/a	1.39
NO _x	n/a	17.20
CO	n/a	3.71
VOC	n/a	1.37

- D. Emissions from the Genset D330 shall be limited to the following [MEDEP Chapter 115, BPT]:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.13
PM ₁₀	0.13
SO ₂	0.39
NO _x	4.85
CO	1.05
VOC	0.39

- E. Emissions from the Genset D334 shall be limited to the following [MEDEP Chapter 115, BPT]:

<u>Pollutant</u>	<u>lb/hr</u>
PM	0.20
PM ₁₀	0.20
SO ₂	0.61
NO _x	7.50
CO	1.62
VOC	0.60

- F. Visible emissions from the Diesel Generator and Genset D334 each shall not exceed 30% on a six (6) minute block average basis, except for two (2) six (6) minute block averages in a 3-hour period.
[MEDEP Chapter 101]
- G. Visible emissions from Genset 3412 and Genset D330 each shall not exceed 20% on a six (6) minute block average basis, except for two (2) six (6) minute block averages in a 3-hour period.
[MEDEP Chapter 101, BPT]
- (18) **Concrete Batch Plant**
 - A. Particulate emissions from the cement silo shall be vented through a baghouse and all components of the batch plant shall be maintained so as to prevent PM leaks. [MEDEP Chapter 115, BPT]
 - B. To document maintenance of the cement silo baghouse, the licensee shall keep a maintenance log recording the date and location of all bag failures as well as all routine maintenance. The maintenance log shall be kept on-site at the concrete batch plant location. [MEDEP Chapter 115, BPT]
 - C. Opacity from the cement silo baghouse is limited to no greater than 10% on a 6 minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period. Lane shall take corrective action if visible emissions from the baghouse exceed 5% opacity. [MEDEP Chapter 101]
 - D. PM emissions from the concrete batching operation shall be controlled so as to prevent visible emissions in excess of 20% opacity on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period. [MEDEP Chapter 101]
- (19) **Rock Crushers**
 - A. Lane shall install and maintain spray nozzles for particulate control on the primary and secondary rock crushers and operate them as necessary to limit visible emissions to no greater than 10% opacity on a six (6) minute block average basis. [MEDEP Chapters 115 (BPT) and 101]
 - B. Lane shall maintain a log detailing the maintenance on the water spray nozzles. The maintenance log shall be kept on-site at the rock crushing location. [MEDEP Chapter 115, BPT]
 - C. Lane shall maintain a log detailing and quantifying the hours of operation on a daily basis for the primary and secondary rock crushers. The operation log shall be kept on-site at the rock crushing location. [MEDEP Chapter 115, BPT]
 - D. The crushers shall not be attached or clamped via cable, chain, turnbuckle, bolt, or other means (except electrical connections) to any anchor, slab, or structure (including bedrock) that must be removed prior to transportation. [MEDEP Chapter 115, BPT]
- (20) **Stockpiles and Roadways**

Visible emissions from a fugitive emission source shall not exceed an opacity of 20 percent, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20 percent in any one (1) hour. [MEDEP Chapter 101]

(21) **General Process Sources**

Visible emissions from any general process source shall (including conveyor belts) not exceed an opacity of 10% on a six (6) minute block average basis, except for no more than one (1) six (6) minute block average in a 1-hour period. [MEDEP Chapter 101 and Chapter 115, BPT]

(22) **Equipment Relocation** [MEDEP Chapter 115, BPT]

A. Lane shall notify the Bureau of Air Quality, by a written notification at least 48 hours prior to relocation of any equipment carried on this license. The notification shall be sent to the address below or to a Department Regional Office:

Attn: Relocation Notice
Maine DEP
Bureau of Air Quality
17 State House Station
Augusta, ME 04333-0017

The notification shall include the address of the equipment's new location, an identification of the equipment and the license number pertaining to the relocated equipment. Written notice may be sent by mail, facsimile (fax), or e-mail.

B. Written notification shall also be made to the municipality where the equipment will be relocated, except in the case of an unorganized territory where notification will be made to the respective county commissioners.

(23) Lane shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard [38 MRSA §605-C].

(24) **Annual Emission Statement**

In accordance with MEDEP Chapter 137, the licensee shall annually report to the Department the information necessary to accurately update the State's emission inventory by means of:

- 1) A computer program and accompanying instructions supplied by the Department;
or
- 2) A written emission statement containing the information required in MEDEP Chapter 137.

Reports and questions should be directed to:

Attn: Criteria Emission Inventory Coordinator
Maine DEP
Bureau of Air Quality
17 State House Station
Augusta, ME 04333-0017
Phone: (207) 287-2437

The emission statement must be submitted by September 1 or as otherwise specified in Chapter 137.

(25) Payment of Fees

Lane shall pay the annual air emission license fee within 30 days of **June 30th** of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 MRSA §341-D, subsection 3. [38 MRSA §353-A]

DONE AND DATED IN AUGUSTA, MAINE THIS _____ DAY OF _____, 2004.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAWN R. GALLAGHER, COMMISSIONER

The term of this license shall be five (5) years from the signature date above.

PLEASE NOTE THE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: May 26, 2004

Date of application acceptance: June 1, 2004

Date filed with the Board of Environmental Protection: _____

This order prepared by Mark E. Roberts, Bureau of Air Quality.